

FIRM / AFFILIATE OFFICES

Abu Dhabi	Moscow
Barcelona	Munich
Beijing	New Jersey
Boston	New York
Brussels	Orange County
Chicago	Paris
Doha	Riyadh
Dubai	Rome
Frankfurt	San Diego
Hamburg	San Francisco
Hong Kong	Shanghai
Houston	Silicon Valley
London	Singapore
Los Angeles	Tokyo
Madrid	Washington, D.C.
Milan	

File No. 048876-0015

April 8, 2013

VIA EMAIL

Ms. Lisa Honma
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Tentative Resolution R9-2013-0003

Dear Ms. Honma:

On behalf of National Steel and Shipbuilding Company (“NASSCO”), we appreciate the opportunity to submit comments to the California Regional Water Quality Control Board for the San Diego Region (“Regional Board”) concerning Tentative Resolution R9-2013-0003 (“Tentative Resolution”) and the accompanying Draft Technical Report (“Technical Report”), as they relate to the mouth of Chollas Creek.

The Tentative Resolution recognizes that NASSCO does not have ongoing discharges to the mouth of Chollas Creek, and NASSCO is not subject to load reductions in the proposed Total Maximum Daily Load (“TMDL”). The Regional Board alleges, however, that NASSCO is responsible for legacy PCB discharges and may be subject to remediation obligations in a contemplated future cleanup and abatement order. But the Regional Board’s authority to issue TMDLs is limited to adopting waste load and load allocations to address existing and future discharges. The Regional Board therefore lacks authority to include sediment remediation requirements in the TMDL or to name NASSCO as a responsible party, and the Tentative Resolution should be revised accordingly.

Further, the Tentative Resolution and Technical Report fail to justify the inclusion of PCBs as a contaminant of concern. As explained in the technical memorandum prepared by Exponent and submitted herewith (“Exponent Report”), available data demonstrates that sediment and water column PCBs are not a source of impairment in the mouth of Chollas Creek, and that PCBs are not causing sediment toxicity or benthic community disturbance. Even the toxicity identification evaluation prepared by the Southern California Coastal Water Research Project (“SCCWRP”) concluded that PCBs are not a source of toxicity. Accordingly, and because the sole basis for naming NASSCO in the Tentative Resolution relates to alleged PCB contamination, NASSCO should be removed from the Resolution on this basis as well.

NASSCO vigorously denies that any of its past discharges are impacting surface sediments in the mouth of Chollas Creek or have the potential to impair beneficial uses. Given the Regional Board's allegations, however, NASSCO seeks to ensure that any numeric targets developed for the mouth of Chollas Creek are reasonable and scientifically sound, particularly to the extent the numeric targets selected here may later influence the future investigation and cleanup of sediments in the mouth of Chollas Creek. The currently proposed numeric targets are arbitrary and lack support from any acceptable risk-based methodology. Nevertheless, it is notable that the available data (presented by the Regional Board) shows that PCB concentrations in the sediments at the mouth of Chollas Creek are decreasing, and that compliance with the proposed sediment target for PCBs already may have been achieved. Thus, there is no basis to require active remediation to address PCB contamination in the mouth of Chollas Creek.

In addition, the proposed implementation schedule in the Tentative Resolution is flawed, inasmuch as it calls for remediation to be completed within eight years of the effective date of the TMDL, while the TMDL's load reductions are not to be fully implemented until 20 years after the TMDL's effective date. This presents the reasonably foreseeable possibility that uncontrolled storm water discharges will recontaminate the site sediment after remediation is completed but before the TMDL is implemented. Although EPA Guidance cautions that source control should be achieved before active remediation, and that the potential for recontamination needs to be considered, the Regional Board has not addressed the possibility of recontamination or taken any steps to protect against it.

NASSCO's specific concerns with the Tentative Resolution and accompanying Technical Report are set forth below. In addition, please note that NASSCO is submitting under separate cover a compilation of exhibits cited in this letter and additional materials for inclusion in the record of proceedings regarding the Tentative Resolution. These materials are included in CDs that were hand-delivered to the Regional Board today.

I. THE REGIONAL BOARD LACKS AUTHORITY TO IMPOSE SEDIMENT REMEDIATION REQUIREMENTS IN A TMDL

The Regional Board's authority to adopt TMDLs is supplied by Clean Water Act section 303(d)(1)(C), which provides for TMDLs to establish the maximum amount of a pollutant that may be *added* to a listed water body, *daily*, from all sources:

Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, **the total maximum daily load**, for those pollutants which the Administrator identifies . . . as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

33 U.S.C. § 1313(d)(1)(C) (emphasis added).

TMDLs are implemented through wasteload allocations for point sources and load allocations for non-point sources. 40 C.F.R. § 130.2(i). These allocations are imposed to limit “existing or future” sources of pollution to the applicable receiving water; they do not actively remediate past pollution. 40 C.F.R. §§ 130.2(g) and (h). Accordingly, there is no basis to impose dredging or other remediation as part of a TMDL. The Tentative Resolution implicitly recognizes this, indicating that remediation will be conducted under subsequent cleanup and abatement order(s) issued by the Regional Board. Tentative Resolution, at B-31. But since the Regional Board lacks authority to impose remediation under the TMDL, there is no basis to include proposed remediation requirements or associated obligations in the TMDL. Likewise, there is no basis to name a “responsible party” in the TMDL solely due to alleged responsibility for remediation under a future order.

This distinction is particularly significant as to NASSCO. NASSCO is named in the Tentative Resolution even though it does not have ongoing discharges affecting the mouth of Chollas Creek, and even though it is not assigned any wasteload or load allocations. Because the Regional Board’s authority to implement a TMDL is limited to the imposition of such load reductions, the Tentative Resolution should be revised to remove any requirements related to sediment remediation and to delete NASSCO as a responsible party.

Further, because the implementation of load reductions in the TMDL is separate and distinct from remediation required under a cleanup and abatement order, the success of each should be separately determined. Different standards also govern each, as, by way of example, the cleanup levels in a cleanup and abatement order are subject to State Water Resources Control Board Resolution 92-49.¹

Finally, separating the TMDL from the sediment cleanup would be consistent with similar water quality control efforts conducted elsewhere in California, including the San Francisco Bay PCB TMDL and the Santa Monica Bay DDT and PCB TMDL, which were approved by EPA in 2010 and 2012, respectively.

II. THE TENTATIVE RESOLUTION PROVIDES NO BASIS FOR INCLUDING PCBs AS A CONTAMINANT OF CONCERN

A. PCBs Should Not Be Included In The TMDL Because Load Reductions Are Not Required To Achieve Water Quality Standards

The TMDL does not include any load reductions for PCBs. Rather, the total maximum allowable load on a daily basis for PCBs is set at 0.0331 g/d, which is equal to the existing calculated load in a high flow year. The Technical Report explains: “[f]or PCBs, watershed reductions are not required as the existing load produced in the modeled high flow year is within the assimilative capacity of the receiving water . . .” Technical Report, at 88 (emphasis added).

¹ As discussed below, the proper procedure would be to first implement the TMDL’s load reductions. After source control is achieved, monitoring should be done to determine the extent to which sediment remediation may be necessary.

As noted, the purpose of a TMDL is to limit existing or future discharges into a water body at a level necessary to implement water quality standards. 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. §§ 130.2(g) and (h). Here, the Regional Board has acknowledged that no reductions for PCBs are required. Thus, there is no justification to include PCBs in the TMDL. Any remediation of PCBs in the mouth of Chollas Creek would be subject to a separate regulatory process—a cleanup and abatement order—and does not warrant including PCBs in the Tentative Resolution.

B. PCBs Are Not A Source Of Impairment In The Mouth of Chollas Creek And Are Not Causing Toxicity

As explained in the Exponent Report submitted with this letter, there is no basis for identifying PCBs as a contaminant of concern in the Tentative Resolution. To the contrary, the available data demonstrates that sediment and water column PCBs are not a source of impairment in the mouth of Chollas Creek, and that PCBs in the sediments at the mouth of Chollas Creek are not causing sediment toxicity or benthic community disturbance. Notably, the toxicity identification evaluation (“TIE”) (Greenstein, Bay et al.) prepared by SCCWRP and relied upon in the Technical Report *concluded that PCBs were not causing sediment toxicity in the mouth of Chollas Creek*. Technical Report, at 8; Appendix F at F-58 (“PCBs are unlikely to be a probable cause of direct sediment toxicity at the Chollas and Paleta sites”). According to the TIE: “measured concentrations of DDTs and PCBs at the study sites *are several orders of magnitude lower than (sic) the levels associated with direct toxicity from sediment exposure.*” As such, the Regional Board has not provided any adequate justification for identifying PCBs as a contaminant of concern,² or for naming NASSCO as a responsible party based solely on alleged historical PCB discharges.

III. THE PROPOSED NUMERIC TARGETS FOR SEDIMENT CONCENTRATION ARE NOT BASED ON ANY MEANINGFUL RISK THRESHOLD

A. There Is No Supportable Technical Basis For Using a 95% UCL Of The Mean Of Unimpacted And Likely Unimpacted Stations

The Technical Report indicates that the numeric targets are based on “the 95 percent upper confidence limit (UCL) of the mean of a dataset that represents ‘unimpacted’ conditions in San Diego Bay (i.e., data that meets the Aquatic Life SQO).” Technical Report, at 27. The Technical Report states that this methodology was “first employed by Thompson et al. (2009) of the San Francisco Estuary Institute Aquatic Science Center.” *Id.* Based on this methodology, the Tentative Resolution proposes a numeric sediment concentration target of 168 ug/kg for total PCBs. Tentative Resolution, at B-25.

As explained in the Exponent Report, the 168 ug/kg target is derived from a flawed approach, and the target has no relevance or relationship to sediment toxicity, bioaccumulation,

² The sole justification offered in the Technical Report—a qualitative finding that sediment PCBs bioaccumulate in clam tissue in laboratory bioassays, is insufficient for the reasons detailed in the Exponent Report, at 6-7.

or impairment at the mouth of Chollas Creek. The numeric target simply is not linked to the presence or absence of ecological effects. In using the 95 percent upper confidence limit of the mean of sediment samples which represent unimpacted conditions, the Regional Board improperly presumed that SQO station scores reflect some causal impairment that can be linked to sediment concentrations of chlordane, PAHs, and PCBs. But the Regional Board failed to conduct any causal analysis of its selected sediment data pool—which is straight-forward technically, and is required by State Board SQO guidance—and also failed to consider the possibility that SQO station scores can reflect the effects of non-chemical stressors. *See* Exponent Report, at 12-15. Only after confirming that any observed benthic impacts have a chemical cause does the SQO process move to the second phase to focus on which specific chemicals are causing degradation, establishment of sediment concentrations associated with degradation, and beyond into mitigation of impacts.

Because the Regional Board failed to conduct the necessary causal analysis, its selection of contaminants of concern, as well as its establishment of numeric targets for those contaminants of concerns, lacks foundation and conflicts with the requirements of the State Board's SQO guidance. For these reasons, the Tentative Resolution and Technical Report must be revised.

It also is notable that the Thompson methodology employed in the Tentative Resolution was not considered in setting cleanup levels for the remediation at the Shipyard Sediment Site adjacent to the mouth of Chollas Creek, pursuant to Order No. R9-2012-0024 ("Shipyard CAO") adopted last year. The Shipyard CAO was preceded by the most extensive sediment investigation ever conducted in San Diego Bay, (Deposition of David Barker ("Barker Depo."), at 83:8-12), and the Shipyard CAO proceedings lasted more than a decade with substantial involvement by staff, stakeholders, the public, and highly regarded expert consultants. The Regional Board should explain why it is relying on a methodology that was not even considered in the very recent establishment of sediment targets adjacent to the mouth of Chollas Creek.

B. The Regional Board's Bay-Wide Approach For Setting Individual Sediment Target Levels Is Inappropriate

The Regional Board pooled data from throughout San Diego Bay to set numeric limits, with no apparent effort to match reference data to conditions at the mouth of Chollas Creek where the numeric targets will be applied. The Technical Report makes no attempt to justify the representativeness of the data pool for use at the mouth of Chollas Creek. Nor is there any apparent attempt to control for or identify differences between the beneficial use impairment, cause of impairment, environmental conditions, or other baseline factors that may influence beneficial uses at the mouth of Chollas Creek. This results in a flawed assessment of the conditions in the mouth of Chollas Creek and flawed numeric targets.

Among other things, criteria for selecting acceptable reference stations include sediment total organic carbon ("TOC") and grain size profiles similar to the site being investigated. *See* Shipyard CAO, at 9. For example, differences in grain size can affect sediment chemistry, benthic community composition and toxicity results, with sediments composed largely of fine particles showing a greater likelihood of apparent toxicity based solely on the size of the

particles. Deposition of Tom Alo (“Alo Depo.”), at 183:22 – 184:6, 184:13 – 185:15. Certain chemicals, including PCBs, have a high affinity for TOC. *Id.*, at 193:20 – 194:2, 194:12 – 195:3, 196:14 – 196:25. As a result, assuming there is equal PCB contamination throughout the Bay, one would expect to see higher PCB concentrations in sediments containing higher percentages of organic carbon—purely as a result of differences in TOC content. *Id.* With no effort to match reference stations to the conditions at the mouth of Chollas Creek, any apparent effects seen in the sediments may be due to differences in percentage of fine particles and organic carbon at the mouth of Chollas Creek, rather than any alleged discharges.

For these reasons, the Technical Report should be revised to use reference areas that are similar to the mouth of Chollas Creek. To the extent reference stations differ from the site being investigated, a revised analysis should evaluate the consequences of such differences on the conclusions reached in the Tentative Resolution.

C. The Aquatic Life Sediment Concentration Targets Are Well Below Appropriate Risk Thresholds

The Tentative Resolution proposes a numeric sediment concentration target of 168 ug/kg for total PCBs for aquatic life protection. Tentative Resolution, at B-25. This target is significantly lower than the extremely conservative risk threshold the Regional Board approved last year at the adjacent Shipyard Sediment Site. In the Shipyard CAO, one metric used to establish appropriate cleanup levels for aquatic life protection was 60% of the Lowest Apparent Effects Threshold (“LAET”). Through this methodology, the Regional Board determined the lowest total PCBs concentration expected to cause adverse effects to benthic life, and then reduced that number significantly by applying a very conservative 40% margin of safety. Technical Report for Cleanup and Abatement Order R9-2012-0024 (“Shipyard Technical Report”), at 32-31. The 60% LAET for total PCBs was determined to be 3,270 ug/kg, which was found to be “protective of benthic communities” with a “significant margin of safety.” *Id.* at 32-39. This is consistent with bay-wide results. Even the data upon which Board staff relied to develop the TMDL includes sediment concentrations of PCBs as high as 2,381 ug/kg for “unimpacted” and “likely unimpacted” stations.

The Tentative Resolution’s proposed target of 168 ug/kg is more than an order of magnitude lower than the conservative target applied in the Shipyard CAO, and is not based on any technically-supportable, risk-based methodology. Accordingly, NASSCO requests that the Regional Board re-evaluate its sediment concentration targets using a recognized risk-based methodology focused on the actual likelihood of effects to benthic life.

D. Regional Board Staff Improperly Removed From The Data Pool Unimpacted Stations With The Highest Concentrations Of Contaminants Of Concern

As detailed in the Exponent Report, in selecting the 95% UCL of the mean concentration to characterize exposure at “unimpacted” and “likely unimpacted” stations, staff improperly elected to remove from its data pool stations with the highest concentration of each contaminant of concern, on the basis that these concentrations were “outliers.” The effect is to drive down the numeric targets. But this decision is wholly improper and lacking in technical justification,

because staff improperly assumed that the data is normally distributed, which it is not. The “ProUCL” statistical program used by staff states that the outlier test relied upon by staff requires normal data, and that “it is necessary to perform a test for normality before applying this [outlier] test.” Further, as guidance from the National Institutes of Standards and Technology provides, “If the normality assumption for the data being tested is not valid, then a determination that there is an outlier may in fact be due to the non-normality of the data rather than the presence of an outlier.” Thus, even if the 95% UCL methodology used in the Tentative Resolution is maintained, the analysis still must be revised to incorporate the highest concentrations of PCBs, PAH, and chlordane found at each station, and the targets adjusted accordingly.

The 2,381 ug/kg concentration of PCBs in an unimpacted station in the data pool used by Regional Board staff is markedly higher than the 168 ug/kg target reached through the Board’s 95% UCL of the mean approach, but provides a true upper limit of sediment concentrations associated with SQO scores of “likely unimpacted” in this data pool.

E. An Expert Analysis of the Data Pool Used To Set Sediment Targets Demonstrates A Lack Of Chemical Causality Of Impairment

Exponent performed a regression analysis of the data pool used by the Regional Board to evaluate the correlation between the identified contaminants of concern (including PCBs) in sediments and biological effects that are included in the Regional Board’s SQO analysis. These biological effects include two amphipod toxicity test responses, amphipod survival and bivalve larval development, as well as four benthic community metrics: BRI, RBI, IBI, and RIVPACs. As shown in the Exponent Report, PCBs and the other target chemicals do not correlate well with any measured indicator of adverse biological effects that is incorporated into the SQO analysis. Thus, the exact same data used to derive the proposed sediment targets disproves the assumptions that underlie the method selected, and strongly suggests a lack of correlation for PCBs and the other target chemicals. Simply put, benthic community disturbance and toxicity are not a function of sediment concentrations of PCBs, chlordane or PAHs. Nor are there any positive correlations between exposure and toxicity for the three target chemicals. The Regional Board’s use of the data to set target levels therefore is without technical justification, and any remediation based on these invalid targets is unlikely to result in reduction of impairment or increase in beneficial uses. *See* Exponent Report, at 16-18.

It is well-recognized that to the extent elevated concentrations of a contaminant are causing adverse effects to benthic life, such adverse effects will correlate with increased concentrations of the contaminant. In other words, more adverse effects will be seen as the concentrations rise. Deposition of Steven Bay (“Bay Depo.”), at 168:11-23 and Ex. 109. The lack of correlation thus demonstrates that elevated sediment chemistry is not causing adverse effects.

F. Even If The Proposed Sediment Target For PCBs Is Appropriate, No Action Is Required To Attain The Target

The TIE analyzed sediments at three stations in the mouth of Chollas Creek for sediment toxicity in three separate surveys. In 2001, concentrations measured at stations C10 and C14 were 189.49 ug/kg and 211.57 ug/kg, respectively, exceeding the Tentative Resolution's proposed target. However, the concentration of PCBs measured in 2002 at the same stations were 112.94 ug/kg and 54.58 ug/kg, well below the proposed target. In 2004, PCBs were not detected at station C13. All congeners were below the detection limit of 1 ug/kg.

Sediment concentrations were also reported by Brown and Bay (2011) for stations C10 and C14. Samples were collected in July and November 2001, and February, June and October 2002. In July 2001 and October 2002, results were the same as reported in the TIE. The mean PCB concentrations in the top 2 cm of Sediment was 138 ug/kg and 136 ug/kg at C10 and C14, respectively, below the Tentative Resolution's proposed target.

This data plainly shows a decreasing trend in the concentration of PCBs in the surface sediments at the mouth of Chollas Creek, and that compliance with the proposed targets already appears to have been achieved. Therefore, no basis exists to impose any remediation to achieve the proposed sediment target for PCBs in the mouth of Chollas Creek (even assuming the target is valid), at least not in the absence of new data showing that PCB concentrations are above the proposed target.

IV. DETERMINING SEDIMENT NUMERIC TARGETS WITHOUT CONDUCTING STRESSOR IDENTIFICATION VIOLATES THE SQOS

A. By Utilizing An SQO Approach, The Sediment Numeric Targets Overemphasize Chemistry, Even Though The SQOs Explicitly Preclude Using The Chemistry LOE To Determine TMDLs

The Tentative Resolution requires the attainment of sediment numeric targets, which are "sediment concentrations that are derived from the Aquatic Life SQO MLOE Approach." Tentative Resolution, at B-25. However, the process in the State Water Resources Control Board's "Water Quality Control Plan For Enclosed Bays and Estuaries Part 1: Sediment Quality" ("SQOs") itself is flawed, as it overemphasizes chemistry data, and fails to sufficiently weight biological data—particularly when relied upon in the absence of a robust stressor identification analysis.³

³ NASSCO notes that the SQOs should not be applied to the mouth of Chollas Creek. The SQOs expressly exempt "existing sediment cleanup activities where a site assessment was completed and submitted to the Regional Water Board by February 19, 2008." SQOs, at § 2.B. The legislative history for the exemption makes clear that the SQOs were never intended to apply to sediment cleanups of water body segments listed under Section 303(d), for which a site assessment was submitted to the Regional Board prior to February 19, 2008. The mouth of Chollas Creek is exempt because the Regional Board approved a detailed sediment investigation,

First, the SQO MLOE analysis is biased towards finding adverse effects, even when the data is equivocal. For example:

- When different toxicity measures produce a range of responses and the average falls between categories, the maximum adverse response (category) is assumed to be representative, which biases the interpretation towards a conclusion that adverse effects are present even when the evidence is equivocal. SQOs, at 10.
- When different benthic community measures produce a range of responses spanning multiple categories and the median falls in between categories, the next highest effect category is assumed to be representative, which biases the interpretation towards a conclusion that adverse effects are present even when the evidence is equivocal. SQOs, at 11.
- When two different chemistry categorization methods produce a range of responses spanning multiple categories and the median falls in between categories, the next highest exposure category is assumed to be representative, which biases the interpretation towards a conclusion that adverse effects are present even when the evidence is equivocal. SQOs, at 14.
- The interpretation for chemically-mediated effects is biased to produce a conclusion that chemicals have a moderate potential to cause toxicity even when the sediment is non-toxic. SQOs, at 15.

Because these biases both systematically drive the MLOE assessment towards conclusions that there are adverse effects and overemphasize the chemistry LOE, by using station designations to calculate sediment numeric targets under the SQOs, the Regional Board is over-relying on a chemistry line of evidence to set TMDLs.⁴ Yet, even the SQOs mandate that “the chemistry LOE of Section V.H.2., including the threshold values (e.g., CSI and CALRM), shall not be used for setting cleanup levels or numeric values for technical TMDLs.” SQOs, at 28. Therefore, to the extent that the chemistry line of evidence is unduly emphasized in the approach for setting load numerics, such a protocol is technically invalid and improper, and in conflict with the SQOs.

conducted by Exponent in 2001, that included a portion of the Chollas Creek TMDL area, and conducted additional Phase I and Phase II sampling of the area prior to February 19, 2008.

⁴ In addition, it appears that the sediment numeric targets are based on chemistry data from only the locations identified as “unimpacted” or “likely unimpacted,” which would appear to omit chemical data from sites classified as “possibly impacted” where toxic chemicals are not the cause of the impact. Thus, the process of deriving numeric targets appears to have omitted potentially relevant chemical data and is not consistent with the SQOs.

B. The Regional Board Did Not Conduct The Stressor Identification Analysis Required By The SQOs

While SQOs are intended to protect benthic communities from harm caused by toxic chemicals, the SQOs recognize that chemical concentrations are not the only possible cause of adverse biological effects: “This [chemistry] LOE does not establish causality associated with specific chemicals.” SQOs, at 7. “The LOEs applied to assess biological effects can respond to stresses associated with natural or physical factors, such as sediment grain size, physical disturbance, or organic enrichment.” *Id.* Accordingly, the mere co-occurrence of elevated chemistry with toxicity or community alteration does not necessarily indicate that the observed biological effects are caused by elevated chemistry. As a result, the SQOs require that a stressor identification analysis be conducted to determine whether the observed effects are due to elevated sediment chemistry, versus other potential causes. Exponent Report, at 13 (“Completion of the initial SQO MLOE analysis does not establish causality between community effects and sediment chemistry or any sediment chemical. Establishment of causality requires an additional step: stressor identification.”).

Specifically, the SQOs make clear that although “[t]he MLOE assessment establishes a linkage to sediment pollutants . . . , the lack of confounding factors (e.g., physical disturbance, non-pollutant constituents) *must* be confirmed.” SQOs, at 24 (emphasis added). This is because “stressors that are not related to toxic pollutants . . . may cause the narrative to be exceeded” *Id.* Examples of such stressors include physical stressors, such as reduced salinity, impacts from dredging, very fine or coarse grain size, prop wash from passing ships, and uncharacterized chemical constituents. *Id.*; *see also* Exponent Report, at 15. As the SQOs recognize, “these types of stressors may produce a non-reference condition in the benthic community that is similar to that caused by pollutants. If impacts to a site are purely due to physical disturbance, the LOE characteristics will likely show a degraded benthic community with little or no toxicity and low chemical concentrations.” SQOs, at 25. In addition, the SQOs recognize that constituents, such as elevated total organic carbon, ammonia, nutrients, and pathogens—all of which are likely to be found in stormwater runoff—may be responsible for biological effects, unrelated to sediment chemistry or legacy pollutants. *Id.*

Here, however, the Regional Board has apparently determined that observed biological effects are attributable to chemistry, *without conducting an appropriate stressor identification as required by the SQOs*. As discussed in the attached Exponent Report, “an objective evaluation of the sediment data pool used to calculate target concentrations clearly shows that [PCBs, PAHs, and Chlordane] are not causally related to either toxicity or community disturbance.” Exponent Report, at 15. “Had the [Regional] Board applied the principles of stressor identification, as required by the SQO guidance, they would have demonstrated a lack of chemical causality.” *Id.* The lack of stressor identification (and flawed pollutant identification) is particularly concerning, given that the Regional Board has previously acknowledged that alternative causes, including “recurring sediment physical disturbance associated with ship engine tests performed at NASSCO Shipyard’s Berth VI may contribute to the observed benthic community impacts in this area.” Technical Report, at 63. *See also* Shipyard Technical Report, at 33-3, 33-4 (“A Total Maximum Daily Load (“TMDL”) is being developed for the mouth of Chollas Creek, which encompasses one station (NA22) of the Shipyard Sediment Site study area

. . . . NA22 is in an area where propeller testing occurs routinely, suggesting that physical impacts could be causing the [moderately] impaired benthic condition.”). Further, (and not surprisingly), the turbulent flow of water from Chollas Creek during storm events could also cause a significant “physical disturbance” of the sediment in the mouth of the creek.

V. THE TENTATIVE RESOLUTION REQUIRES APPLICATION OF THE SQO NARRATIVE STANDARD FOR HUMAN HEALTH, BUT IMPLEMENTATION GUIDANCE FOR THE PHASE II SQOS HAS NOT BEEN ISSUED

The Tentative Resolution states that “attainment of the TMDLs is based on . . . attaining the SQOs for benthic community protection (aquatic life) and human health in the creek mouth areas of Paleta, Chollas, and Switzer creeks in San Diego Bay.” Tentative Resolution, at B-27. With respect to human health, the SQOs provide that:

Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health. . . . Th[is] narrative human health objective . . . shall be implemented on a case-by-case basis, based upon a human health risk assessment. In conducting a risk assessment, the Water Boards shall consider any applicable and relevant information, including California Environmental Protection Agency’s (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) policies for fish consumption and risk assessment, Cal/EPA’s Department of Toxic Substances Control (DTSC) Risk Assessment, and U.S. EPA Human Health Risk Assessment policies.

SQOs, at 6, 19.

However, the State Board has not yet adopted a process for implementing this narrative objective, and is not expected to do so for several years. As a result, it is unclear how the Regional Board will assess whether the human health SQO is met, or whether the *Macoma* tissue monitoring study proposed in the Tentative Resolution (or any other risk assessment ordered by the Regional Board) will be consistent with the Phase II SQO guidance that ultimately is adopted. Given the delays in the Phase II SQO process to date, and the lack of any State Board guidance for implementing the narrative human health objective comprising the Phase II SQOs, it is premature for the Regional Board to order attainment of the Phase II SQOs.

VI. THE FISH TISSUE CONCENTRATION TARGETS ARE EXCESSIVELY CONSERVATIVE

The Tentative Resolution includes overly-conservative metrics for assessing risk to human health. The Tentative Resolution proposes a fish tissue target for PCBs based on the Office of Environmental Health and Hazard Assessment’s (“OEHHA”) Fish Consumption Guideline of 3.6 parts per billion (“ppb”), which is based on a maximum cancer risk level of 1×10^{-6} . Tentative Resolution, at B-20. But the cited guidance from OEHHA lists numerous

benefits of fish consumption, and concludes that “setting the risk level at 1×10^{-5} or 1×10^{-6} would restrict fish consumption to the extent that it could largely deny fishers the numerous health benefits that can be accrued through fish consumption.” Accordingly, OEHHA concluded that a maximum risk level of 1×10^{-4} should be used to determine whether to issue a fish consumption advisory. See OEHHA, *Development of Fish Contaminant Goals and Advisory Tissue Levels For Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene* (June 2008). Using this more appropriate risk level, OEHHA further concluded that fish tissue levels containing between 21 and 120 ppb PCBs pose no significant health risk, and can be consumed safely, depending on the size and frequency of servings.

The Tentative Resolution’s proposed fish tissue target of 3.6 ppb is overly-conservative in light of the OEHHA guidance it purports to rely on. Accordingly, the fish tissue target should be revised based on OEHHA’s 1×10^{-4} risk level.

VII. *MACOMA NASUTA* TISSUE IS NOT APPROPRIATE FOR ASSESSING HUMAN HEALTH RISK

The Tentative Resolution requires monitoring “to assess the human health threat from post-remediation creek mouth sediments in San Diego Bay at Paleta, Chollas, and Switzer creek mouths.” Tentative Resolution, at B-30. The monitoring will test bioaccumulation of PCBs by exposing *Macoma nasuta* clams to site sediments. *Id.* The investigative order will be issued within four years of the effective date of TMDLs⁵, with a baseline monitoring event prior to remediation to be followed by sampling every two to three years after remediation until concentrations meet the numeric targets. *Id.* There are several flaws with this approach.

First, the proposed schedule calls for baseline monitoring to be conducted before the load reductions in the TMDL are fully implemented. The baseline assessment therefore would comprise different conditions than those that will exist when the TMDL is fully implemented and source control is achieved. This is not logical. Instead, the baseline sampling (and any active remediation) should not be conducted until the load reductions are fully implemented.

Second, *Macoma nasuta* clams are proposed to be used as a “surrogate” for concentration of PCBs in fish tissue in the mouth of Chollas Creek. But there is no need to use a surrogate when actual fish tissue results are readily available to be collected, which would provide more accurate and representative results. The Technical Report contends that clams are “sessile” and will represent bioaccumulation only from the sediment at the mouth of Chollas Creek. Technical Report, at 32. By contrast, fish are “mobile,” and fish tissue samples would represent bioaccumulation from San Diego Bay as a whole. But since the purpose of the analysis is to demonstrate hypothetical human health risks from fish caught in the mouth of Chollas Creek and consumed by humans (though there is no evidence that fishing occurs in this location), the fish

⁵ The Tentative Resolution is inconsistent regarding when the investigative order will issue. Page B-30 indicates that the investigative order will be issued within four years of the effective date of the TMDLs. Page B-35 provides that the investigative order will issue within six years of the effective date.

tissue analysis should be representative of fish actually present in the mouth of Chollas Creek, mobile or not. In addition, use of a surrogate is based on laboratory generated bioaccumulation data that may not be relevant to actual environmental conditions. Expert Report of Brent L. Finley, Ph.D., DABT, in connection with the Shipyard CAO (“Finley Report”), at 8.

Third, even if a “surrogate” is used, an appropriate surrogate species should show ecological and physical similarities to a species that would naturally occur at the mouth of Chollas Creek and be harvested by humans. Expert Report of Thomas C. Ginn, Ph.D., in connection with the Shipyard CAO (“Ginn Report”), at 78. Based on studies conducted in connection with the Shipyard Sediment Site, *Macoma nasuta* is relatively rare in the vicinity of the mouth of Chollas Creek, and is not subject to recreational or subsistence harvesting by humans in California, or elsewhere. *Id.* On this point the Technical Report acknowledges that *Macoma* “is not a primary food source for humans.” Technical Report, at 32.

Internal Regional Board staff documentation, which appears to be an early draft of the Technical Report, shows that Regional Board staff had concerns about the utility of *Macoma* as a surrogate for fish.⁶ Staff initially proposed to use a “translation factor that is accepted for risk assessment” to convert bioaccumulant concentrations in *Macoma* tissue to expected bioaccumulant concentrations in fish tissue. But this proposal was stricken out, and the Technical Report issued by the Regional Board does not explain why a “translation factor” was not included, or justify the use of *Macoma* in the absence of some analysis showing tissue concentrations in *Macoma* are a viable surrogate for fish tissue concentrations.

VIII. THERE IS NO BASIS TO ESTABLISH HUMAN HEALTH-BASED NUMERIC TARGETS FOR CHOLLAS CREEK

The Tentative Resolution proposes numeric targets to restore human health beneficial uses by attaining the narrative SQOs for Human Health. Tentative Resolution, at B-6. The Technical Report explains that “the TMDL must address impairments affecting all identified beneficial uses,” and that numeric targets for human health are included “to directly address the commercial and sport fishing (COMM) and shellfish harvesting (SHELL) beneficial uses identified in the Basin Plan for these waters.” Technical Report, at 31. But the Basin Plan’s list of identified beneficial uses for Chollas Creek does not include commercial and sport fishing or shellfish harvesting. *Id.* at 20. Because fishing and shellfish harvesting are not identified beneficial uses for Chollas Creek, there is no basis to set human health based numeric targets to restore these beneficial uses. Accordingly, the human health numeric targets should be removed from the Tentative Resolution.

In addition, the Tentative Resolution does not provide any evidence that fishing or shellfish harvesting is occurring or is expected to occur in or around the mouth of Chollas Creek, a storm water discharge area surrounded by industrial uses. Thus, the assumptions that would need to be made to support human health-based cleanup requirements in the mouth of Chollas Creek (*i.e.*, subsistence angling) would be unrealistic and unsupported.

⁶ See Draft of Toxic Pollutants in Sediment TMDLs, Mouths of Poleta, Chollas, Switzer Creeks, October 15, 2012.

IX. ANY ELEVATED CHEMISTRY OBSERVED IN CHOLLAS CREEK IS NOT ATTRIBUTABLE TO NASSCO'S OPERATIONS

A. NASSCO Has Been a "Zero-Discharge" Facility For Stormwater Since 1997

The Technical Report acknowledges that NASSCO maintains a Storm Water Diversion System designed to capture all storm water runoff from industrial areas in the Shipyard, for discharge to the San Diego Metropolitan Sewer System, so that industrial storm water is not discharged to San Diego Bay. Technical Report, at 63. The Technical Report indicates that NASSCO initiated the capture of first-flush storm water from its dry dock, graving dock, paint and blasting areas in 1990, and that this protection was extended to additional areas of the facility in 1997. Technical Report, at 47. The only potential storm water source to Chollas Creek from NASSCO—runoff from a portion of the facility's employee parking lots—was determined to be "negligible." Technical Report, at 91.

The Storm Water Diversion System is supplementary to other pollution prevention controls incorporated at the Shipyard to eliminate contaminant releases. These include onsite treatment of bilge and ballast water, implementation of state of the art best management practices, and ongoing training of all personnel in pollution prevention practices. Technical Report, at 63. As a result, and as recognized in the Tentative Resolution, NASSCO is not responsible for any recent, current or ongoing discharges affecting the sediments at the mouth of Chollas Creek.

B. Legacy NASSCO Discharges, If Any, Are Not Impacting Beneficial Uses In The Mouth of Chollas Creek

Despite the absence of recent or ongoing discharges affecting Chollas Creek, NASSCO is named in the Tentative Resolution due to alleged "historical" or "legacy" contributions of PCBs. For the reasons explained below, any past NASSCO discharges are not affecting beneficial uses in the mouth of Chollas Creek.⁷

1. There Is No Evidence That NASSCO Has Used PCBs In Its Operations

As a threshold matter, there is no evidence that NASSCO has ever used or released PCBs as part of its Shipyard operations. The Technical Report references activities relating to paint discharges as an alleged source of PCBs from NASSCO. But there is no evidence that NASSCO has used PCB-containing paints in its operations. The evidence is to the contrary. *See* Letter from John Kelly Ph.D., Technical Director of Marine Coatings, to Judie Blakey, NASSCO regarding PCBs in Marine Coatings, dated October 14, 2008 (paint supplier confirming that raw materials containing PCBs were never used in its marine paint formulations, including marine paint formulations during the mid-1900s).

⁷ As noted already, the Regional Board has failed to justify including PCBs as a contaminant of concern or shown that PCBs are causing toxicity in the sediments at the mouth of Chollas Creek or any impairment to benthic communities.

2. Legacy NASSCO Discharges, If Any, Would Not Affect Surface-Level Sediments At The Mouth Of Chollas Creek

Sediments buried below approximately 10 cm generally do not impact the water or marine environment because they are below the biologically active zone, and are not biologically available. Deposition of David Gibson, (“Gibson Depo.”), at 156:3-157:12. It follows that alleged beneficial use impairments from sediment contamination occur from surface level contamination. Because the Tentative Resolution is intended to address aquatic life and human health beneficial uses, surface level sediment contamination necessarily must be its focus.

NASSCO is not responsible for any surface level sediment contamination at the mouth of Chollas Creek, because it has not had a material discharge to this area since at least 1997 (and never discharged PCBs). Any contaminants of concern contained in historical discharges from NASSCO have by now been covered by new sediment deposits and are not biologically available. By way of example, the Regional Board determined a sedimentation rate of approximately 1-2 cm/year at the adjacent Shipyard Sediment Site, (Shipyard Technical Report, at 30-3), suggesting that new sediment will quickly bury any residual contamination. Given the passage of at least 16 years since a material NASSCO discharge, any contaminants contained in historical NASSCO discharges are well below the biologically active zone. For these reasons, the Tentative Resolution should be revised to reflect that NASSCO is not responsible for any contributions to surface level sediment contamination at the mouth of Chollas Creek, and therefore is not responsible for any impairment to beneficial uses resulting from elevated sediment chemistry found at the mouth of Chollas Creek, even assuming such impairment could be shown.

Moreover, the Technical Report notes that the Navy conducted “significant” dredging at the mouth of Chollas Creek in 1997. Technical Report, at 58. We understand that approximately 100,000 cubic yards of sediment was removed during the 1997 dredging episode.⁸ This dredging coincided with NASSCO’s expansion of its Storm Water Diversion System to cover all industrial areas of the Shipyard in 1997. Because any legacy industrial NASSCO discharges occurred before 1997, they may well have been removed by the Navy’s dredging.

C. Uncontrolled Sources of Pollution Unrelated To NASSCO Are Impacting Sediments At The Mouth Of Chollas Creek

The Tentative Resolution and Technical Report are clear that uncontrolled sources of pollution unrelated to NASSCO are affecting sediments at the mouth of Chollas Creek. “Essentially all sources (point and nonpoint) in the watersheds enter Paleta, Chollas, and Switzer Creek mouths through the storm water conveyance systems that are regulated through NPDES permits” inapplicable to NASSCO. Technical Report, at 35. Accordingly, NASSCO is not assigned any load reductions in the proposed TMDL. *Id.* at 91 and 93. Because any legacy NASSCO discharges are not impacting beneficial uses as described above, and because any contaminants of concern reaching the sediments in the mouth of Chollas Creek are from

⁸ See October 6, 2008 email from Len Sinfield to Cynthia Gorham, et al.

discharges unrelated to NASSCO, any observed elevated chemistry in the mouth of Chollas Creek is not attributable to NASSCO's operations. The TMDL should be revised accordingly.

X. STATE BOARD RESOLUTION 92-49 REQUIRES SIMILAR SITES TO BE TREATED SIMILARLY

State Water Resources Control Board Resolution 92-49 ("Resolution 92-49") provides guidance to the regional boards regarding issuance of cleanup and abatement orders under Clean Water Act section 13304. The Tentative Resolution acknowledges that any cleanup and abatement order issued by the Regional Board will be subject to Resolution 92-49. Tentative Resolution, at B-31; Technical Report, at 119.

Under Resolution 92-49, the "Regional Water Board shall . . . prescribe cleanup levels which are *consistent* with appropriate levels set by the Regional Water Board for analogous discharges that involve similar wastes, site characteristics, and water quality considerations." *See also* Barker Depo., at 345:12-345:17 (recognizing that a goal of Resolution 92-49 is to ensure that Regional Boards treat similar sites similarly). Principles of due process and equal protection also require fundamental fairness, and that similarly situated persons subject to legislation or regulation be treated alike. U.S. Const. amend. XIV, §1; Cal. Const. art. I, §§ 7, 15.

The mouth of Chollas Creek is within the same water body as, and immediately adjacent to, the Shipyard Sediment Site. The Tentative Resolution and the Shipyard CAO both identify total PCBs as a contaminant of concern. The Tentative Resolution is being considered for adoption approximately one year after the Shipyard CAO was adopted. Hence, Resolution 92-49 dictates that cleanup levels implemented under the Tentative Resolution be "consistent" with those in the Shipyard CAO.

The cleanup levels imposed by the Shipyard CAO are substantially more stringent than levels imposed by the Regional Board for other shipyard and boatyards locations on San Diego Bay involving analogous discharges and similar circumstances to the Shipyard Sediment Site. *See e.g.*, San Diego Regional Board Order Nos. 88-86, 88-78, 89-31, 84-100, 94-101, 94-102, 95-21, 97-63, 99-06, 2001-303, R9-2002-0072; Barker Depo., Ex. 1210 at Exhibit A; Cleanup Team Response to NASSCO's RFA No. 21. Many of these sites, including the Commercial Basin Boatyards, Paco Terminals, Convair Lagoon, and Campbell Shipyard are similar to the NASSCO Shipyard (and the mouth of Chollas Creek) in many respects, including but not limited to geographical location, water quality considerations, uses, wastes, beneficial uses, and receptors of concern. Barker Depo., at 118:14 – 140:1; 346:25 – 352:15; 354:22 – 361:18; 385:17 – 387:4, 564:25 – 565:23, 567:7 – 567:16; *see also* Barker Depo., Ex. 1210 at Exhibit A. Despite these similarities, the cleanup levels imposed by the Shipyard CAO are far more stringent than those for the other sites, including Campbell Shipyard, for the same constituents. *See e.g.*, Barker Depo., 365:8 – 365:23. More specifically, cleanup levels for PCBs are much more stringent at NASSCO than Campbell. Barker Depo., Ex. 1210 at Exhibit A.

To reach such low cleanup levels for Shipyard CAO, staff introduced extreme conservatism into its analysis. For example, cleanup levels for Campbell were calculated using

an apparent effects approach; while the lowest apparent effects threshold was utilized for the Shipyard CAO, which included an additional 40% safety buffer. This resulted in exceptionally low cleanup levels compared to other sites in the Bay. Barker Depo., 373:14 – 374:22.

Because the cleanup levels imposed at the Shipyard Site are much lower than (and inconsistent with) levels required at similar sites in the Bay, the Shipyard CAO violated Resolution 92-49. Here, the Tentative Resolution proposes PCB numeric targets dramatically lower than even the levels set in the Shipyard CAO, as discussed above. Resolution 92-49 precludes such targets from being mandated as part of any cleanup and abatement order issued for the mouth of Chollas Creek, and the Tentative Resolution should be revised to clarify this point.

XI. IT IS INAPPROPRIATE TO REMEDIATE BEFORE THE TMDL'S LOAD REDUCTIONS ARE FULLY IMPLEMENTED

A. Source Control Should Be Established Before Remediation

Under the Tentative Resolution's Implementation Action Schedule, 100% attainment of the TMDL's waste load reductions is not required until 20 years after the effective date of the TMDL. Tentative Resolution, at B-35. The same schedule requires a cleanup and abatement order for the mouth of Chollas Creek to be issued within 6 years after the effective date of the TMDL, with remediation to be completed within 8 years of the effective date. Thus, dredging will be completed before source control has been established and while uncontrolled storm water discharges continue to reach sediments in the mouth of Chollas Creek. This process is contrary to black-letter guidance providing that source control should be established prior to active remediation, and presents a risk of recontamination.

According to EPA Guidance, "significant continuing upland sources . . . should be controlled to the greatest extent possible before sediment cleanup." Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, EPA-540-R5-05-012 (Dec. 2005) ("Remediation Guidance") at 2-21; *see also id.* at 2-20 ("[i]dentifying and controlling contaminant sources typically is critical to the effectiveness of any [] sediment cleanup."). Further, EPA Guidance cautions that "project managers should consider the potential for recontamination and factor that potential into the remedy selection process" "**before any sediment action is taken.**" *Id.* at 2-21 (emphasis added). Ideally, source control should be achieved prior to active remediation because "[t]he long-term effectiveness of any remedial option can be reduced if sediment transport acts to recontaminate the site." SPAWAR Interim Guidance for Assessing Sediment Transport at Navy Facilities (June 2004), at 5-2. Regional Board staff have acknowledged that dredging prior to source control may cause recontamination. See Deposition of Cynthia Gorham ("Gorham Depo."), at 63:4-63:23.

There is no dispute that ongoing storm water discharges are depositing contaminants (although not PCBs) to the mouth of Chollas Creek. Nor is there any dispute that these sources will not be sufficiently controlled for at least 20 years after the effective date of the TMDL.

Indeed, the time-period for attainment could be longer.⁹ Nevertheless, contrary to the guidance discussed above, the Tentative Resolution does not discuss why active remediation is proposed prior to source control, or consider the extent to which recontamination could ameliorate the benefits of pre-source control dredging.

The Tentative Resolution should be revised so that remediation is not scheduled until after the load reductions have been fully implemented. At minimum, the Regional Board must address the potential for recontamination and consider measures to protect against it. A revised Tentative Resolution should also discuss the extent to which its remediation goals may be infeasible and unachievable because of ongoing storm water contamination.

B. Implementation of Load Reductions, Along With Monitored Natural Attenuation, May Obviate Any Need For Dredging

Dredging prior to full implementation of the TMDL's load reductions also is flawed because the numeric targets may be achieved through implementation of source control in concert with monitored natural attenuation – an option that improperly was omitted from the Regional Board's analysis.

Monitored natural attenuation refers to the reliance on natural processes to achieve site-specific remedial objectives. As explained in the Technical Report prepared for the Shipyard Sediment Site CAO, monitored natural attenuation:

[i]s a contaminated sediment remedy that depends on un-enhanced natural processes to reduce risk to human and environmental receptors to acceptable levels. [Monitored natural attenuation] involves leaving the contaminated sediment in place and allowing the ongoing aquatic processes to contain, destroy, or otherwise reduce the bioavailability of the sediment pollutants in order to achieve site specific remedial action objectives. Underlying MN[A] processes may include biodegradation, biotransformation, bioturbation, diffusion, dilution, adsorption, volatilization, chemical reaction or destruction, resuspension, and burial by clean sediment.

Shipyard Technical Report, at 30-2.

With respect to PCBs, it appears that natural attenuation is already occurring at the mouth of Chollas Creek based upon the available data. PCB concentrations are decreasing and

⁹ For example, the Chollas Creek TMDL for metals, adopted in 2008, does not require full compliance until 2028. Regional Board staff testified that compliance will probably not be achieved on schedule because existing technology is insufficient and cost-prohibitive. Deposition of Benjamin Tobler ("Tobler Depo."), at 90:6-92:5 ("[W]ithout getting into space-age technology, which is extremely cost-prohibitive, the only possible fix for the problem is a system of sand filters . . . the best sand filters right now only just barely get you to the ballpark of compliance. There's no margin of safety with it."). Thus, it is "probable" that full compliance will not be achieved, even after 20 years and significant infrastructure improvements, "unless technology comes to the rescue." *Id.* at 91:23-24.

compliance with the proposed PCB target appears already to have been achieved. Further, by way of example, in connection with the Shipyard Sediment Site CAO, sampling conducted in 2009 demonstrated that natural attenuation is occurring in that location of the Bay, which is adjacent to the mouth of Chollas Creek, as the Surface Weighted Average Concentrations for the five primary contaminants of concern at the Shipyard Sediment Site (including PCBs) decreased substantially in the monitored locations during the seven years since initial data collection in 2002. Natural attenuation can reasonably be expected to continue at the mouth of Chollas Creek for PCBs and, presumably, the other contaminants of concern.

Given the likelihood that natural attenuation will improve sediment conditions at the mouth of Chollas Creek, particularly as source control is implemented, active remediation should be postponed until after the load reductions have been fully attained. At that time, sampling should be conducted to determine the extent to which dredging or other remedial activities are required, and the remediation can be tailored in response to the then-existing conditions. This would avoid potential recontamination from storm water discharges. This may also avoid the need for dredging, or require less dredging than would be required before source control is established and before the benefits of natural attenuation have been realized. Given the potentially significant and unavoidable environmental impacts associated with dredging that have been identified by the Regional Board, including air quality impacts and adverse impacts to benthic communities, this approach should be favored.

XII. THE CEQA ANALYSIS IS INADEQUATE

The Basin Plan amendment process constitutes a certified regulatory program pursuant to which written documentation may be substituted in lieu of an environmental impact report (“EIR”) under the California Environmental Quality Act, Public Resources Code section 21000, *et seq.* (“CEQA”). Pub. Res. Code § 21080.5; 14 Cal. Code Regs. (“CEQA Guidelines”) § 15251(g). To establish CEQA compliance, the Regional Board is relying on “substitute environmental documentation” provided in the Technical Report, the proposed Basin Plan amendment contained within the Tentative Resolution, and an Environmental Analysis and Checklist (“Environmental Analysis”) presented in Appendix H. The Environmental Analysis fails to comply with CEQA in certain important respects, including those discussed below.

A. An Alternative Combining Monitored Natural Attenuation With The TMDL’S Load Reductions Should Be Evaluated

Substitute environmental documentation must include “[a]n analysis of reasonably foreseeable alternative methods of compliance that would have less significant adverse environmental impacts.” 23 Cal. Code Regs. § 3777(b)(4)(B); *see also* CEQA Guidelines § 15252(a)(2)(A). Because the substitute documentation serves as the “functional equivalent” of an EIR, it must “provide public and governmental decisionmakers with detailed information on the project’s likely effect on the environment, describe ways of minimizing any significant impacts, point out mitigation measures, *and identify any alternatives that are less environmentally destructive.*” *Ebbetts Pass Forest Watch v. Cal. Dept. of Forestry & Fire Protection*, 43 Cal. 4th 936, 943 (2008) (emphasis added). Substitute environmental documentation “is subject to the broad policy goals and substantive standards of CEQA.” *City of*

Arcadia v. State Water Resources Control Bd., 135 Cal. App. 4th 1392, 1422 (2006) (citation omitted). Further “[t]he board shall not adopt or approve a project that would cause significant adverse impacts if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse impact that the project may have on the environment.” 23 Cal. Code Regs. § 3780(a).

The discussion of alternatives in the Environmental Analysis studied the proposed project and two other alternatives. The first alternative was similar to the proposed project but with a 10-year, rather than 20-year, compliance schedule. Environmental Analysis, at H-84. The 10-year schedule was determined to be too short to implement the TMDL, and also would not reduce the proposed project’s significant environmental impacts. *Id.* at H-84. The second alternative proposed taking “no action.” *Id.* at H-85. The “no action” alternative was environmentally preferable because it would avoid environmental impacts including impacts associated with dredging or capping. *Id.*; *see also id.* at H-33 (identifying potentially significant air quality impacts from dredging) and H-37-38 (identifying potentially significant biological impacts from dredging). However, the “no action” alternative was found to be infeasible because it would not comply with the Water Code section 303(d) requirement to address the impairment listing. *Id.* at H-85. The proposed project was selected as the “preferred” alternative. *Id.*

A reasonably foreseeable alternative omitted from the analysis is the implementation of load reductions called for by the TMDL, combined with monitored natural attenuation in place of active remediation. Under this approach, the conditions in the mouth of Chollas Creek could be monitored as the load reductions are implemented to determine if source control efforts, combined with natural attenuation, are concurrently achieving the desired sediment quality. After the 20-year compliance period (or near the completion of that effort), monitoring would assess the extent to which dredging is needed, and the scope of any required dredging. If sediment quality targets have been achieved at this time, this alternative would avoid the significant environmental impacts to air quality and the benthic community that will result from active remediation. If the monitoring shows that conditions have improved, although not enough to avoid dredging entirely, the scope of dredging may be reduced as compared to what would be required only six years after the effective date of the Tentative Resolution, when cleanup abatement orders are to be issued under the Tentative Resolution and when discharges would still exceed the TMDL and recontaminate the sediment. This in turn would minimize the environmental impacts associated with the dredging.

This proposed alternative also would avoid the potentially significant environmental impact of recontamination that may result if dredging occurs prior to source control. Recontamination could also require a subsequent round of dredging, causing even more environmental damage.

As noted above, available data suggests that the proposed PCB sediment target already has been met and that no dredging is required for PCBs. Also discussed above, evidence from the Shipyard CAO proceeding demonstrates that natural attenuation is occurring at the adjacent Shipyard Sediment Site, resulting in significant sediment quality improvements. Thus, it appears to be certain that dredging is not necessary for PCBs, and there is a reasonable likelihood that the

implementation of the TMDL's load reductions, in concert with natural attenuation, will feasibly achieve the objectives of the Tentative Resolution for the other contaminants of concern. To the extent monitoring shows that targets have not been met after the 20-year compliance schedule, appropriate dredging or other remediation could be implemented at that time.

In discussing the "no action" alternative, the Environmental Analysis states that "some improvement might be seen over time through natural attenuation," but dismisses this remedy because it would not reduce sediment loads or remove contaminated sediment. Environmental Analysis, at H-85. But the analysis fails to consider use of monitored natural attenuation in connection with load reductions required by the TMDL. Also, by discussing natural attenuation in the context of the "no action" alternative, the analysis fails to recognize that monitored natural attenuation is not a "no action" remedy, as it requires monitoring and other actions to determine the extent to which sediment quality is being attained, and provides for active remediation if goals are not met.

Because implementation of the TMDL's load reductions with monitored natural attenuation is a reasonably foreseeable alternative that could avoid significant environmental impacts and feasibly attain project objectives, this alternative should be evaluated in a revised Environmental Analysis document, and selected in place of the proposed project.

B. The Regional Board Failed To Address Potential Recontamination From Ongoing Storm Water Discharges

1. Recontamination Could Cause Potentially Significant Environmental Impacts

The Environmental Analysis also fails to address potentially significant impacts that could result if dredged areas within the mouth of Chollas Creek are recontaminated by ongoing storm water discharges that will not be controlled when the remediation is scheduled to be completed. Assuming the TMDL is implemented on schedule, there will be 12 years of uncontrolled storm water discharges after the remediation is completed but before the load reductions have fully been implemented.

Logic dictates against dredging before sources are controlled. As noted above, EPA Guidance provides that source control should generally be achieved before active remediation, and that "project managers should consider the potential for recontamination and factor that potential into the remedy selection process" "*before any sediment action is taken.*" Remediation Guidance, at 2-21. The Tentative Resolution, Technical Report, and Environmental Analysis fail to heed this directive. There is no analysis of potential recontamination or feasible mitigation. The substitute environmental documentation thus fails to comply with the mandate to identify potentially significant environmental impacts and analyze reasonable alternatives or mitigation measures. 23 Cal. Code Regs. § 3777(b). Therefore, the Tentative Resolution may not be approved. *Id.* at § 3780(a); *see also City of Arcadia*, 135 Cal. App. 4th at 1425 (invalidating TMDL under CEQA for failure to analyze reasonably foreseeable impacts of pollution control measures and mitigation for same).

Importantly, CEQA requires an analysis of “indirect” environmental effects. An indirect effect is defined as an effect “which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.” CEQA Guidelines § 15064(d)(2). Recontamination constitutes a reasonably foreseeable indirect environmental effect of the proposed project. Hence, CEQA analysis is required. CEQA Guidelines §§ 15064(d)(2) and 15358(a)(2); 23 Cal. Code Regs. § 3777(b).

2. Recontamination May Render The Proposed Project Infeasible

The proposed project is identified as Alternative 1 in the Environmental Analysis. It is black-letter CEQA law that “potentially feasible” alternatives must be considered. CEQA Guidelines § 15126.6(a). CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” CEQA Guidelines § 15364. Thus, the proposed project is not “feasible” to the extent that recontamination precludes its successful and timely implementation. The failure to address recontamination therefore results in an inadequate assessment of the feasibility of the proposed project.

XIII. THE METHODOLOGY USED TO DETERMINE SEDIMENT NUMERIC TARGETS WAS NOT PEER REVIEWED, AS REQUIRED BY THE CALIFORNIA HEALTH AND SAFETY CODE

The Tentative Resolution acknowledges that the scientific portions of the proposed TMDL are subject to the external peer review requirements of California Health & Safety Code section 57004. However, based on the documentation provided, it does not appear that the methodology used to determine sediment numeric targets was submitted for external peer review. *See* Tentative Resolution, at B-11; Technical Report, at 6; Technical Report Appx. A, at A-1.

The Tentative Resolution develops sediment numeric targets using an Aquatic Life SQO MLOE Approach, which involves calculating the “the 95 percent upper confidence limit (UCL) of the mean of a dataset that represents ‘unimpacted’ conditions in San Diego Bay (i.e., data that meets the Aquatic Life SQO),” and setting the numeric target at that level. Technical Report, at 27. But this methodology was not included in the list of key issues provided to the peer reviewers, as set forth in Appendix A to the Technical Report. Rather, the peer reviewers were asked to assess the validity of a *different* methodology for setting numeric targets (the Logistic Regression Model Threshold 20 Percent Values (“LRM T20”)), which was subsequently rejected by the Regional Board and replaced with the Aquatic Life SQO MLOE Approach. Technical Report, at 26-31.

California Health & Safety Code Section 57004 expressly provides that “[n]o board . . . shall take any action to adopt the final version of a rule unless . . . the board submits the scientific portions of the proposed rule, along with a statement of the scientific findings, conclusions, and assumptions on which the scientific portions of the proposed rule are based and the supporting scientific data, studies, and other appropriate materials, to [an] external scientific

peer review entity for its evaluation.” Cal. Health & Safety Code § 57004. “Scientific portions” include “those foundations of a rule that are premised upon, or derived from, empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard, or other requirement for the protection of public health or the environment.” *Id.*

Accordingly, while NASSCO agrees that the LRM T20 is not a valid approach to setting numeric targets and was appropriately rejected after peer review, the Regional Board is obligated to submit the proposed Aquatic Life SQO MLOE Approach for external peer review under California Health & Safety Code section 57004. The Regional Board may not adopt the Tentative Resolution prior to obtaining the necessary external peer review.

XIV. THE REGIONAL BOARD HAS NOT COMPLETED ITS RESPONSE TO NASSCO’S PUBLIC RECORDS ACT REQUEST

On January 24, 2013, our office submitted a California Public Records Act request for “all data, analyses, documents and communications” related to the Downtown Anchorage and Chollas Creek TMDL methodology. While we received partial productions from Regional Board staff on March 19, 2013 and April 3, 2013, we are still awaiting the production of additional responsive records, including notes, e-mail communications, and relevant public records contained on Regional Board staffs’ personal computers.

Since some of the records were not produced until Wednesday, April 3, more than two months after our request, there was not sufficient time for review, analysis and preparation of comments by NASSCO’s experts and counsel prior to the filing deadline of Monday, April 8, at noon, less than three business days after the documents were provided to NASSCO by the Regional Board staff.

Finally, many of the files contained in the April 3rd production were in a proprietary format, and could not readily be accessed.

We will continue to work with the Regional Board to obtain the complete production in an accessible manner; however, given the timeliness of NASSCO’s Public Records Act request and the delay in the Regional Board’s response, and given the importance of the requested information to NASSCO’s ability to comment fully on the Tentative Resolution, NASSCO reserves the right to submit additional comments after it has had a meaningful opportunity to review the entirety of the Regional Board’s production. Please be advised that should the Regional Board decline to consider comments based on public records that were not timely produced by the Regional Board, the comments will nonetheless be admissible in any subsequent judicial proceedings regarding adoption of the Tentative Resolution. *See, e.g., Western States Petroleum Ass’n v. Superior Court*, 9 Cal. 4th 559, 578 (1995).

XV. NASSCO INCORPORATES BY REFERENCE ARGUMENTS AND EVIDENCE SUBMITTED IN THE SHIPYARD CAO PROCEEDINGS

NASSCO submitted detailed comments, evidence, and expert analyses to the Regional Board in the Shipyard CAO proceedings. These materials are relevant to the Tentative Resolution insofar as both proceedings address alleged sediment contamination and remediation

LATHAM & WATKINS^{LLP}

in an immediately adjacent location of San Diego Bay. Rather than repeating its prior comments and analyses in their entirety, NASSCO incorporates by this reference its arguments and evidence submitted in connection with the Shipyard CAO. NASSCO is including within its submission of materials in support of these comments prior briefing, expert reports, and evidence (including deposition transcripts and written discovery responses) from the Shipyard CAO proceedings, including information contained in the Shipyard CAO administrative record that is cited in this letter.

Very truly yours,


Kelly E. Richardson
of LATHAM & WATKINS LLP

Enclosure

cc: Matthew Luxton
Michael Askew
T. Michael Chee
Jeffrey P. Carlin